

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Canceled)

2. (Previously Presented) A light emitting device comprising:

at least a pixel comprising:

a light emitting element;

n first memories (n is a natural number);

n second memories;

n first thin film transistors;

n second thin film transistors;

gate signal lines; and

a latch signal line;

means for determining a length of a period in which the light emitting element emits a light in accordance with a plurality of image information of digital video signals stored in each of the n second memories,

wherein each bit of n bit digital video signals is sequentially written in each of the n first memories,

wherein each bit of the n bit digital video signals, which have been written in each of the n first memories, is stored in each of the n second memories,

wherein the period turn up successively in one frame period,

wherein the one frame period includes the period and a writing period, and

wherein a gate electrode of each of the n first thin film transistors is connected to each of the gate signal lines and a gate electrode of each of the n second thin film transistors is connected to the latch signal line.

3. (Previously Presented) A light emitting device comprising:

a plurality of pixels, each of the plurality of pixels comprising:

a light emitting element;

a thin film transistor for controlling a current provided to the light emitting element;

n first memories (n is a natural number);

wherein each bit of n bit digital video signals is sequentially written in each of the n first memories;

n second memories;

wherein each bit of the n bit digital video signals written in each of the n first memories is stored in each of the n second memories;

a counter circuit for outputting n counter signals having different frequencies respectively; and

a display signal generating portion to turn on the thin film transistor during a period that starts with start of output of the n counter signals stored in the n second memories and ends as a plurality of first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches a plurality of second information of each of the n counter signals.

4. (Previously Presented) A light emitting device comprising:
a plurality of pixels, each of the plurality of pixels comprising:
a light emitting element;
a thin film transistor for controlling a current provided to the light emitting element;
n first memories (n is a natural number);
wherein each bit of n bit digital video signals is sequentially written in each of the n first memories;
n second memories;
wherein each bit of the n bit digital video signals written in each of the n first memories is stored in each of the n second memories;
a counter circuit for outputting n counter signals having different frequencies respectively; and
a display signal generating portion to turn on the thin film transistor during a period which is determined by a plurality of information of each bit of the n bit digital video signals inputted to the display signal generating portion and a plurality of information of each of the n counter signals.

5-6 (Canceled)

7. (Previously Presented) A method of driving a light emitting device,

said light emitting device including a plurality of pixels, each of the plurality of pixels comprising:

n first memories (n is a natural number);

n second memories;

a display signal generating portion;

a counter circuit;

a light emitting element;

said method comprising the steps of:

sequentially writing each bit of n bit digital video signals in each of the n first memories;

writing each bit of the n bit digital video signals, which have been written in each of the n first memories, in each of the n second memories at once;

inputting each bit of the n bit digital video signals, which have been written in each of the n second memories, to the display signal generating portion;

starting an output of n counter signals from the counter circuit in response to a reset signal, the n counter signals having different frequencies respectively;

inputting the n counter signals to the display signal generating portion,

wherein the light emitting element emits a light only during a period that starts with the start of the output of the n counter signals and ends as a plurality of first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches a plurality of second information of each of the n counter signals.

8. (Previously Presented) A method of driving a light emitting device,
said light emitting device including a plurality of pixels, each of the plurality of
pixels comprising:

- n first memories (n is a natural number);
- n second memories;
- n first switching thin film transistors;
- n second switching thin film transistors;
- a display signal generating portion;
- a counter circuit; and
- a light emitting element,

said method comprising the steps of:

- sequentially turning on the n first switching thin film transistors to write
each bit of n bit digital video signals in each of the n first memories;
- turning on the n second switching thin film transistors at once to write
each bit of the n bit digital video signals written in each of the n first memories in each of
the n second memories at once;
- inputting each bit of the n bit digital video signals written in each of the n
second memories to the display signal generating portion;
- starting an output of n counter signals from the counter circuit in response
to a reset signal, the n counter signals having different frequencies respectively; and
- inputting the n counter signals to the display signal generating portion,
wherein the light emitting element emits a light only during a period that
starts with the start of the output of the n counter signals and ends as a plurality of first

information of each bit of the n bit digital video signals inputted to the display signal generating portion matches a plurality of second information of each of the n counter signals.

9. (Previously Presented) A method of driving a light emitting device,
said light emitting device including a plurality of pixels, each of the plurality of pixels comprising:

- n first memories (n is a natural number);
- n second memories;
- n first switching thin film transistors;
- n second switching thin film transistors;
- a display signal generating portion;
- a counter circuit;
- a current controlling thin film transistor; and
- a light emitting element,

said method comprising the steps of:

sequentially turning on the n first switching thin film transistors to write each bit of n bit digital video signals in each of the n first memories;

turning on the n second switching thin film transistors at once to write each bit of the n bit digital video signals written in each of the n first memories in each of the n second memories at once;

inputting each bit of the n bit digital video signals written in each of the n second memories to the display signal generating portion;

starting an output of n counter signals from the counter circuit in response to a reset signal, the n counter signals having different frequencies respectively; and

inputting the n counter signals to the display signal generating portion,

wherein the current controlling thin film transistor is turned on by a display signal outputted from the display signal generating portion only during a period that starts with the start of the output of the n counter signals and ends as a plurality of first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches a plurality of second information of each of the n counter signals, and

wherein the light emitting element emits a light when the current controlling thin film transistor is turned on.

10. (Previously Presented) The method of driving the light emitting device according to claim 9,

wherein the current controlling thin film transistor is an n -channel thin film transistor.

11. (Previously Presented) A method of driving a light emitting device,

said light emitting device including a plurality of pixels, each of the plurality of pixels comprising:

n first memories (n is a natural number);

n second memories;

a display signal generating portion;

a counter circuit;

a light emitting element;

said method comprising the steps of:

sequentially writing each bit of n bit digital video signals in each of the n first memories;

writing each bit of the n bit digital video signals written in each of the n first memories in each of the n second memories at once;

inputting each bit of the n bit digital video signals written in each of the n second memories to the display signal generating portion;

starting an output of n counter signals from the counter circuit in response to a reset signal, the n counter signals having different frequencies respectively;

inputting the n counter signals to the display signal generating portion,

wherein the display signal generating portion has,

a first function of comparing a plurality of first information of each bit of the n bit digital video signals inputted to the display signal generating portion with a plurality of second information of each of the n counter signals inputted to the display signal generating portion to judge whether or not the plurality of first and second information match; and

a second function of making the light emitting element emit a light only during a period that starts with the start of the output of the n counter signals and ends as the plurality of the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the plurality of the second information of each of the n counter signals.

12. (Previously Presented) A method of driving a light emitting device,
said light emitting device including a plurality of pixels, each of the plurality of
pixels comprising:

- n first memories (n is a natural number);
- n second memories;
- n first switching thin film transistors;
- n second switching thin film transistors;
- a display signal generating portion;
- a counter circuit; and
- a light emitting element,

said method comprising the steps of:

- sequentially turning on the n first switching thin film transistors to write
each bit of n bit digital video signals in each of the n first memories;

- turning on the n second switching thin film transistors at once to write
each bit of the n bit digital video signals written in each of the n first memories in each of
the n second memories at once;

- inputting each bit of the n bit digital video signals written in each of the n
second memories to the display signal generating portion;

- starting an output of n counter signals from the counter circuit in response
to a reset signal, the n counter signals having different frequencies respectively;

- inputting the n counter signals to the display signal generating portion,
wherein the display signal generating portion has,

a first function of comparing a plurality of first information of each bit of the n bit digital video signals inputted to the display signal generating portion with a plurality of second information of each of the n counter signals inputted to the display signal generating portion to judge whether or not the plurality of first and second information match; and

a second function of making the light emitting element emit a light only during a period that starts with the start of the output of the n counter signals and ends as the plurality of the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the plurality of the second information of each of the n counter signals.

13. (Previously Presented) A method of driving a light emitting device, said light emitting device including a plurality of pixels, each of the plurality of pixels comprising:

- n first memories (n is a natural number);
- n second memories;
- n first switching thin film transistors;
- n second switching thin film transistors;
- a display signal generating portion;
- a counter circuit;
- a current controlling thin film transistor; and
- a light emitting element,

said method comprising the steps of:

sequentially turning on the n first switching thin film transistors to write each bit of n bit digital video signals in each of the n first memories;

turning on the n second switching thin film transistors at once to write each bit of the n bit digital video signals written in each of the n first memories in each of the n second memories at once;

inputting each bit of the n bit digital video signals written in each of the n second memories to the display signal generating portion;

starting an output of n counter signals from the counter circuit in response to a reset signal, the n counter signals having different frequencies respectively;

inputting the n counter signals to the display signal generating portion,
wherein the display signal generating portion has,

a first function of comparing a plurality of first information of each bit of the n bit digital video signals inputted to the display signal generating portion with a plurality of second information of each of the n counter signals inputted to the display signal generating portion to judge whether or not the plurality of first and second information match; and

a second function of turning on the current controlling thin film transistor only during a period that starts with the start of the output of the n counter signals and ends as the plurality of the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the plurality of the second information of each of the n counter signals,

wherein the light emitting element emits a light when the current controlling thin film transistor is turned on.

14. (Previously Presented) The method of driving the light emitting device according to claim 13,

wherein the current controlling thin film transistor is an n-channel thin film transistor.

15. (Previously Presented) The method of driving the light emitting device according to claim 7,

wherein the display signal generating portion has a NOR and n exclusive ORs,

wherein each of the n exclusive ORs has two input terminals,

wherein one of the input terminals is inputted with each bit of the n bit digital video signals inputted to the display signal generating portion while the other is inputted with the n counter signals,

wherein each of the output terminals of the n exclusive ORs is all connected to an input terminal of the NOR,

wherein third information of signals outputted from an output terminal of the NOR is used to judge whether or not the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each the n counter signals inputted to the display signal generating portion.

16. (Previously Presented) The method of driving the light emitting device according to claim 7,

wherein the display signal generating portion has an R-S flip-flop circuit,

wherein the R-S flip-flop circuit has two input terminals,

wherein one of the input terminals is inputted with reset signals while the other is inputted with signals having third information whether or not the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each of the n counter signals inputted to the display signal generating portion,

wherein signals outputted from an output terminal of the R-S flip-flop circuit causes the light emitting element to emit a light only during a period that starts with the start of output of the n counter signals and ends as the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each of the n counter signals.

17. (Previously Presented) The method of driving the light emitting device according to claim 7,

wherein each of the first memories and second memories is an SRAM.

18. (Previously Presented) The method of driving the light emitting device according to claim 7,

wherein clock signals are inputted to the counter circuit, and

wherein frequencies of the n counter signals arranged in order from the highest to the lowest correspond to $1/2$, $1/2^2$, ..., $1/2^n$ of frequencies of the clock signals, respectively.

19. (Canceled)

20. (Previously Presented) A liquid crystal display device comprising:

at least a pixel comprising:

a liquid crystal cell;

n first memories (n is a natural number);

n second memories;

n first thin film transistors;

n second thin film transistors; and

gate signal lines;

means for determining a length of a period in which the liquid crystal cell is turned on in accordance with a plurality of image information of digital video signals stored in each of the n second memories,

wherein each bit of n bit digital video signals is sequentially written in each of the n first memories,

wherein each bit of the n bit digital video signals written in each of the n first memories is stored in each of the n second memories,

wherein the period turn up successively in one frame period,

wherein the one frame period includes the period and a writing period, and

wherein a gate electrode of each of the n first thin film transistors is connected to each of the gate signal lines and a gate electrode of each of the n second thin film transistors is connected to a latch signal line.

21-24. (Canceled)

25. (Original) An electronic apparatus in combination with the liquid crystal display device of claim 20.

26. (Currently Amended) The electronic apparatus according to claim 25,
wherein the electronic apparatus is ~~one selected from the group consisting of an~~
~~electroluminescence display device, a digital still camera, a notebook computer, a mobile~~
~~computer, an image reproducing device, a goggle type display, a video camera, and a~~
~~cellular phone.~~

27-30. (Canceled)

31. (Original) An electronic apparatus in combination with the light emitting device of claim 2.

32. (Currently Amended) The electronic apparatus according to claim 31,
wherein the electronic apparatus is ~~one selected from the group consisting of an~~
~~electroluminescence display device, a digital still camera, a notebook computer, a mobile~~
~~computer, an image reproducing device, a goggle type display, a video camera, and a~~
~~cellular phone.~~

33. (Original) An electronic apparatus in combination with the light emitting device of claim 3.

34. (Currently Amended) The electronic apparatus according to claim 33,
wherein the electronic apparatus is ~~one selected from the group consisting of an~~
~~electroluminescence display device, a digital still camera, a notebook computer, a mobile~~
~~computer, an image reproducing device, a goggle type display, a video camera, and a~~
~~cellular phone.~~

35. (Original) An electronic apparatus in combination with the light emitting device of claim 4.

36. (Currently Amended) The electronic apparatus according to claim 35,
wherein the electronic apparatus is ~~one selected from the group consisting of an~~
~~electroluminescence display device, a digital still camera, a notebook computer, a mobile~~
~~computer, an image reproducing device, a goggle type display, a video camera, and a~~
~~cellular phone.~~

37. (Currently Amended) The method of driving the light emitting device according to 7,

wherein the light emitting device is in combination with an electronic apparatus,
wherein the electronic apparatus is ~~one selected from the group consisting of an~~
~~electroluminescence display device, a digital still camera, a notebook computer, a mobile~~

~~computer, an image reproducing device, a goggle type display, a video camera, and a cellular phone.~~

38. (Previously Presented) The method of driving the light emitting device according to claim 8,

wherein the display signal generating portion has a NOR and n exclusive ORs,

wherein each of the n exclusive ORs has two input terminals,

wherein one of the input terminals is inputted with each bit of the n bit digital video signals inputted to the display signal generating portion while the other is inputted with the n counter signals,

wherein each of the output terminals of the n exclusive ORs is all connected to an input terminal of the NOR,

wherein third information of signals outputted from an output terminal of the NOR is used to judge whether or not the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each the n counter signals inputted to the display signal generating portion.

39. (Previously Presented) The method of driving the light emitting device according to claim 8,

wherein the display signal generating portion has an R-S flip-flop circuit,

wherein the R-S flip-flop circuit has two input terminals,

wherein one of the input terminals is inputted with reset signals while the other is inputted with signals having third information whether or not the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each of the n counter signals inputted to the display signal generating portion,

wherein signals outputted from an output terminal of the R-S flip-flop circuit causes the light emitting element to emit a light only during a period that starts with the start of output of the n counter signals and ends as the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each of the n counter signals.

40. (Previously Presented) The method of driving the light emitting device according to claim 8,

wherein each of the first memories and second memories is an SRAM.

41. (Previously Presented) The method of driving the light emitting device according to claim 8,

wherein clock signals are inputted to the counter circuit, and

wherein frequencies of the n counter signals arranged in order from the highest to the lowest correspond to $1/2$, $1/2^2$, ..., $1/2^n$ of frequencies of the clock signals, respectively.

42. (Currently Amended) The method of driving the light emitting device according to 8,

wherein the light emitting device is in combination with an electronic apparatus,

wherein the electronic apparatus is ~~one selected from the group consisting of an electroluminescence display device, a digital still camera, a notebook computer, a mobile computer, an image reproducing device, a goggle type display, a video camera, and a cellular phone.~~

43. (Previously Presented) The method of driving the light emitting device according to claim 9,

wherein the display signal generating portion has a NOR and n exclusive ORs,

wherein each of the n exclusive ORs has two input terminals,

wherein one of the input terminals is inputted with each bit of the n bit digital video signals inputted to the display signal generating portion while the other is inputted with the n counter signals,

wherein each of the output terminals of the n exclusive ORs is all connected to an input terminal of the NOR,

wherein third information of signals outputted from an output terminal of the NOR is used to judge whether or not the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each the n counter signals inputted to the display signal generating portion.

44. (Previously Presented) The method of driving the light emitting device according to claim 9,

wherein the display signal generating portion has an R-S flip-flop circuit,

wherein the R-S flip-flop circuit has two input terminals,

wherein one of the input terminals is inputted with reset signals while the other is inputted with signals having third information whether or not the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each of the n counter signals inputted to the display signal generating portion,

wherein signals outputted from an output terminal of the R-S flip-flop circuit causes the light emitting element to emit a light only during a period that starts with the start of output of the n counter signals and ends as the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each of the n counter signals.

45. (Previously Presented) The method of driving the light emitting device according to claim 9,

wherein each of the first memories and second memories is an SRAM.

46. (Previously Presented) The method of driving the light emitting device according to claim 9,

wherein clock signals are inputted to the counter circuit, and

wherein frequencies of the n counter signals arranged in order from the highest to the lowest correspond to $1/2$, $1/2^2$, ..., $1/2^n$ of frequencies of the clock signals, respectively.

47. (Currently Amended) The method of driving the light emitting device according to 9,

wherein the light emitting device is in combination with an electronic apparatus,

wherein the electronic apparatus is ~~one selected from the group consisting of an electroluminescence display device, a digital still camera, a notebook computer, a mobile computer, an image reproducing device, a goggle type display, a video camera, and a cellular phone.~~

48. (Previously Presented) The method of driving the light emitting device according to claim 11,

wherein the display signal generating portion has a NOR and n exclusive ORs,

wherein each of the n exclusive ORs has two input terminals,

wherein one of the input terminals is inputted with each bit of the n bit digital video signals inputted to the display signal generating portion while the other is inputted with the n counter signals,

wherein each of the output terminals of the n exclusive ORs is all connected to an input terminal of the NOR,

wherein third information of signals outputted from an output terminal of the NOR is used to judge whether or not the first information of each bit of the n bit digital

video signals inputted to the display signal generating portion matches the second information of each the n counter signals inputted to the display signal generating portion.

49. (Previously Presented) The method of driving the light emitting device according to claim 11,

wherein the display signal generating portion has an R-S flip-flop circuit,

wherein the R-S flip-flop circuit has two input terminals,

wherein one of the input terminals is inputted with reset signals while the other is inputted with signals having third information whether or not the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each of the n counter signals inputted to the display signal generating portion,

wherein signals outputted from an output terminal of the R-S flip-flop circuit causes the light emitting element to emit a light only during a period that starts with the start of output of the n counter signals and ends as the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each of the n counter signals.

50. (Previously Presented) The method of driving the light emitting device according to claim 11,

wherein each of the first memories and second memories is an SRAM.

51. (Previously Presented) The method of driving the light emitting device according to claim 11,

wherein clock signals are inputted to the counter circuit, and

wherein frequencies of the n counter signals arranged in order from the highest to the lowest correspond to $1/2$, $1/2^2$, ..., $1/2^n$ of frequencies of the clock signals, respectively.

52. (Currently Amended) The method of driving the light emitting device according to 11,

wherein the light emitting device is in combination with an electronic apparatus,

wherein the electronic apparatus is ~~one selected from the group consisting of an electroluminescence display device, a digital still camera, a notebook computer, a mobile computer, an image reproducing device, a goggle type display, a video camera, and a cellular phone.~~

53. (Previously Presented) The method of driving the light emitting device according to claim 12,

wherein the display signal generating portion has a NOR and n exclusive ORs,

wherein each of the n exclusive ORs has two input terminals,

wherein one of the input terminals is inputted with each bit of the n bit digital video signals inputted to the display signal generating portion while the other is inputted with the n counter signals,

wherein each of the output terminals of the n exclusive ORs is all connected to an input terminal of the NOR,

wherein third information of signals outputted from an output terminal of the NOR is used to judge whether or not the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each the n counter signals inputted to the display signal generating portion.

54. (Previously Presented) The method of driving the light emitting device according to claim 12,

wherein the display signal generating portion has an R-S flip-flop circuit,

wherein the R-S flip-flop circuit has two input terminals,

wherein one of the input terminals is inputted with reset signals while the other is inputted with signals having third information whether or not the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each of the n counter signals inputted to the display signal generating portion,

wherein signals outputted from an output terminal of the R-S flip-flop circuit causes the light emitting element to emit a light only during a period that starts with the start of output of the n counter signals and ends as the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each of the n counter signals.

55. (Previously Presented) The method of driving the light emitting device according to claim 12,

wherein each of the first memories and second memories is an SRAM,

56. (Previously Presented) The method of driving the light emitting device according to claim 12,

wherein clock signals are inputted to the counter circuit, and

wherein frequencies of the n counter signals arranged in order from the highest to the lowest correspond to $1/2$, $1/2^2$, ..., $1/2^n$ of frequencies of the clock signals, respectively.

57. (Currently Amended) The method of driving the light emitting device according to 12,

wherein the light emitting device is in combination with an electronic apparatus,

wherein the electronic apparatus is ~~one selected from the group consisting of an electroluminescence display device, a digital still camera, a notebook computer, a mobile computer, an image reproducing device, a goggle type display, a video camera, and a cellular phone.~~

58. (Previously Presented) The method of driving the light emitting device according to claim 13,

wherein the display signal generating portion has a NOR and n exclusive ORs,

wherein each of the n exclusive ORs has two input terminals,

wherein one of the input terminals is inputted with each bit of the n bit digital video signals inputted to the display signal generating portion while the other is inputted with the n counter signals,

wherein each of the output terminals of the n exclusive ORs is all connected to an input terminal of the NOR,

wherein third information of signals outputted from an output terminal of the NOR is used to judge whether or not the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each the n counter signals inputted to the display signal generating portion.

59. (Previously Presented) The method of driving the light emitting device according to claim 13,

wherein the display signal generating portion has an R-S flip-flop circuit,

wherein the R-S flip-flop circuit has two input terminals,

wherein one of the input terminals is inputted with reset signals while the other is inputted with signals having third information whether or not the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the second information of each of the n counter signals inputted to the display signal generating portion,

wherein signals outputted from an output terminal of the R-S flip-flop circuit causes the light emitting element to emit a light only during a period that starts with the start of output of the n counter signals and ends as the first information of each bit of the

n bit digital video signals inputted to the display signal generating portion matches the second information of each of the n counter signals.

60. (Previously Presented) The method of driving the light emitting device according to claim 13,

wherein each of the first memories and second memories is an SRAM.

61. (Previously Presented) The method of driving the light emitting device according to claim 13,

wherein clock signals are inputted to the counter circuit, and

wherein frequencies of the n counter signals arranged in order from the highest to the lowest correspond to $1/2$, $1/2^2$, ..., $1/2^n$ of frequencies of the clock signals, respectively.

62. (Currently Amended) The method of driving the light emitting device according to 13,

wherein the light emitting device is in combination with an electronic apparatus,

wherein the electronic apparatus is ~~one selected from the group consisting of an electroluminescence display device, a digital still camera, a notebook computer, a mobile computer, an image reproducing device, a goggle type display, a video camera, and a cellular phone.~~

63-64. (Canceled)

65. (Previously Presented) A light emitting device according to claim 2,
wherein the one frame period further includes a non-light emission period.

66. (Previously Presented) The light emitting device according to claim 2,
wherein each of the n first memories and the n second memories is an SRAM.

67. (Previously Presented) The light emitting device according to claim 20,
wherein each of the n first memories and the n second memories is an SRAM.

68-71. (Canceled)